

by the Surrogate of Westchester County on March 14th, contains the following provision:

"Item 6. My herbarium of Aster specimens, so far as now stored in my residence, I give to the New York Botanical Gardens to supplement those which I have already given there."

The specimens were received from Mrs. Burgess on June 7th, and at a meeting of the Scientific Directors held June 9th the following minute was authorized:

The collection of herbarium specimens of North American Asters formed during many years of study by Professor Edward Sandford Burgess, bequeathed by him to The New York Botanical Garden, received from Mrs. Burgess in June 1928, is a noteworthy addition of the herbarium of the institution. It fully illustrates all the plants described by him in "Species and Variations of Biotian Asters, with Discussion of Variability in Asters," published in 1906 as the thirteenth volume of *Memoirs of the Torrey Botanical Club*, following his learned "History of Pre-Clusian Botany in its relation to Aster," published in volume ten of these *Memoirs*.

Professor Burgess had been an Annual Member of the Garden since 1906, and he served as a Scientific Director during 1912 and 1913, while President of the Torrey Botanical Club.

The specimens supplementing those already given by him will be deposited in the herbarium of the Garden.

An appreciative record of his life and work has been written by Dr. Howe for publication in *Bulletin of the Torrey Botanical Club*.

N. L. BRITTON.

TORREY BOTANICAL CLUB FIELD TRIPS

Walking Fern was observed by members of the Torrey Botanical Club, on summer field trips, in two localities of exceptional interest, where geological conditions evidently governed the occurrence of the species. On July 15, on a walk from Arden, N. Y., through the western part of the Harriman State Park, over the Arden-Surebridge Trail, and the Surebridge Mine Road, the party was led to a limestone boulder, of a formation found in the Wallkill Valley, twenty miles northwest, a glacial fragment transported to the region and

laid down by the melting of the ice among masses of the country rock of granite and gneiss. On this limestone boulder, about five feet long and three feet thick is a thriving colony of the Walking Fern, the only one known in the Harriman Park, or the Hudson Highlands, though perhaps similar limestone erratics not yet reported, in remote spots, might bear like colonies. The marvel is, how the spores of the fern brought from the Wallkill Valley, where it is common on the country limestone, took root upon this isolated boulder among the Highland Archaean formations.

On July 28, another stand of Walking Fern was seen, on Firey Brook, a stream which enters Pompton Lake, near Pompton, N. J., on its east side, a quarter of a mile above the outlet dam. The left fork of this brook has worn a pretty gorge with a wall fifty feet high on the south or cutting side of the stream, with Newark sandstone at the top and at the bottom a curious kind of conglomerate, with pebbles and cobbles of rounded or sub-angular limestone, of basalt similar to that in the Packanack Ridge, close by, and of the Newark sandstone, just above. This conglomerate has been described by Dr. H. B. Kummel, in his report on the Glacial Geology of New Jersey, but is probably much older than the Pleistocene. The source of the sandstone and of the basalt is obvious enough, as these formations are in place close by, the igneous rock being visible in the dam at the outlet of the lake, and making up the semi-circle of hills which surrounds the brook valley, while the sandstone is the prevailing formation in the Pompton Valley to the west and in Bergen County to the north, and there is an inlier of it in the lower courses of both branches of the brook, underlaid by the conglomerate.

But the source of the limestone is not so obvious. It is thought to be of the same formation as that quarried on the surface at Tomkins Cove, and also found on the east side of the Hudson on Verplanck's Point. Dr. Kummel thinks it existed in the form of ledges or cliffs along the front of the older, Archaean formation of the Ramapo mountains, and that most of it was carried down some thousands of feet by the great fault—the famous Logan Line—which bounds the Ramapo granites and gneisses and the Triassic sandstones and diabases or basalts in Rockland County, New York and Bergen and Passaic counties in New Jersey. But, before this faulting,

erosion in stream beds, entering either a shallow estuary or a broad, swampy valley, in which the Triassic red sandstone was laid down, carried stream gravel into pockets in which it was compressed into conglomerate beds, such as this in the gorge, of Firey Brook, including among the pebbles, the basalt and sandstone. These beds escaped the great downthrow of the Logan Line. Farther north along the Ramapo River and Mahwah Creek, in Rockland County, New York, are conglomerate beds with limestone and granite pebbles, and at Stony Point is a bed along the same fault line, with limestone pebbles only in a red sandstone matrix, the basalt and granite being absent. At the Firey Brook conglomerate bed, limestone makes up at least one third of the material in the formation and this limestone evidently was hospitable to the usually lime loving Walking Fern. Here again the wonder is how the spores of the fern found a home in this glen, far from their occurrence on limestone ledges northward. Walking Fern has not been reported on the other limestone conglomerate along the fault line to the Hudson.

The excursion on August 5, primarily for a visit to the American Museum of Natural History station for the Study of insects, near Southfields, N. Y., included an unexpected pleasure, a swim in the cool, spring fed waters of Spruce Pond, which was grateful on a day with the temperature approaching the nineties. The Brooklyn Boy Scouts have been given the use of this place, for a leanto camp group, by the Palisades Interstate Park Commission, and their leader, Archibald T. Shorey, an enthusiastic amateur botanist, welcomed the party with hospitality in the form of cold lemonade, and the use of a boat, in which the shores of the little bog-lined tarn were comfortably examined. This little pond, high up on Wildcat Mountain, is quite unsuspected from the busy Ramapo Valley motor highway. Its plant associations are very interesting. Its name is from a small, scattered stand of red spruce, one of the most southern at such an altitude. There is also considerable American larch or tamarack, likewise an extreme southern stand in the east. Around the boggy shores the Virginia chain fern is abundant, with *Cassandra*, *Andromeda polifolia*, *Drosera rotundifolia*, *Calla palustris*, Pitcher Plant and other bog loving species. Mr. Shorey reported *Pogonia ophiglossoides* and

Blepharioglottis psycodes and *lacera*, in the dense and watery depths of the tamarack swamp. The pond is covered with white water lilies, one of the most numerous colonies remaining in this region.

Mr. A. T. Beals reported to the chairman of the field committee, that on August 5 at Clinton, Conn., he found an extraordinarily large stand of *Blepharioglottis ciliaris*, the Yellow Fringed Orchis, with 2500 flowering stalks, in a space 200 by 50 feet on the edge of a salt marsh. Some racemes were seven inches long, with as many as 150 flowers.

RAYMOND H. TORREY.

NEWS NOTES

Dr. and Mrs. T. D. A. Cockerell have returned to the University of Colorado from their trip around the world. They spent considerable time in Russia and Siberia visiting scientists and collecting. After several stops in India and Australia, visits were made to New Caledonia, Fiji, Samoa and the Hawaiian Islands. While in Siberia Dr. Cockerell sent the notes on the flora of the country published in our November-December number of last year.

After a summer in studying and collecting grasses in Newfoundland and Labrador, Dr. A. S. Hitchcock has returned to Washington, where he is in charge of systematic agrostology in the Bureau of Plant Industry.

Professor F. A. Varrelman, of the Department of Biology of the American University, Washington, D. C., spent the summer in a study of dodders in the laboratories and herbarium of the New York Botanical Garden.

Dr. Roland M. Harper has completed the catalogue of the shrubs and trees of Alabama on which he has been working for several years. The catalogue makes a book of about 350 pages and is printed as a state report for free distribution throughout the state.

The report is illustrated with numerous maps of distribution and photographs of the trees and shrubs.

Mr. Wilhelm N. Suksdorf, of Bingen, Washington, was awarded the honorary degree of Master of Science in Botany at the spring commencement of the State College of Washing-